

REMARKS/ARGUMENTS

In response to the Official Action dated October 7, 2003, Applicant amends the application and requests reconsideration. In the Amendment, claims 34 and 44 have been amended to correct typographic errors. No new matter has been added. Claims 12-48 are now pending and under examination.

The objection to claim 34 has been overcome by the amendment to replace the term "G-connecting" with "ε-connecting."

Claims 12-14, 18-23, 30-36, and 40-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over Loeffler (U.S. Patent 5,560,461) in view of Madsac (U.S. Patent 4,531,984). For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

The Office Action contended that it would have been obvious to apply the γ' and ϵ phases of Madsac to the cone synchronizer of Loeffler. Loeffler discloses a cone synchronizer having conical friction surfaces. One of the friction surfaces has a layer of friction material (77, 78), such as friction paper, and the other surface is probably metallic. The Office Action contends that the motivations exist to combine the teachings of the references, citing the motivations to improve the overall fatigue and seizure characteristics of the synchronizer rings and to increase the resistance to wear and corrosion.

In the reply dated July 22, 2003, Applicant stated that the motivations, cited by the Examiner, would not have motivated a person with ordinary skill in the art to combine the cited references. First, Applicant argued that the Examiner had failed to indicate where in the prior art exist the suggestions to combine the teachings of Loeffler and Madsac. Additionally and alternatively, Applicant argued that when one of the friction surfaces is a soft friction material (77, 78) and the other is a metallic material, as is the case in Loeffler, there is no evidence that applying a γ' or ϵ layer on the surface of the metallic material

improves fatigue and seizure characteristics or increase resistance to wear and corrosion.

In the current Office Action, the Examiner addressed Applicant's first argument by contending that Madsac provided the motivation to combine the reference teachings, but failed to respond Applicant's second argument at all. Applicant respectfully submits that the Examiner's failure to respond to Applicant's second argument is a violation of PTO requirements. See MPEP 707.07(f) ("[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it). Furthermore, because the final Office Action does not include a rebuttal of all of Applicants' arguments, the final rejection of the claims is improper. See MPEP 706.07 (the final rejection should include a rebuttal of any arguments raised in the applicant's reply).

As stated above, Applicant's second argument is that Madsac did not provide the motivation to combine the teachings of Loeffler and Madsac. Madsac stated that it was well known that "nitriding or carbonitriding process in the gaseous phase are used to improve the fatigue and seizure characteristics and to increase the resistance to wear and corrosion of steels." In Loeffler, a cone synchronizer has conical friction surfaces, wherein one of the friction surfaces has a layer of friction material (77, 78), such as friction paper, and the other surface appears to be metallic. In this situation, fatigue failure and wear of the metallic surface is generally not a problem, because the soft friction material generally does not cause fatigue failure and meaningful wear of the metallic surface. And seizure is a problem only when both surfaces are metallic. Further, corrosion of the metallic surface is not a problem because the transmissions generally are provided with lubricating oil. Therefore, Madsac does not provide the motivation to nitride or carbonitride the metallic surface of Loeffler. Consequently, it is improper to reject claims 12-14, 18-23, 30-36, and 40-48 as being unpatentable over Loeffler in view of Madsac.

Application No. 09/763,199
Reply dated April 1, 2004
Response to Office Action dated October 7, 2003

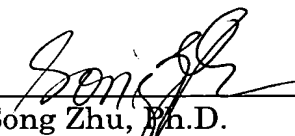
Claims 15-17, 24-29, 37-39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Loeffler in view of Madsac and further in view of two other references. Since the propriety of this rejection relies on the propriety of the first rejection, this rejection is improper because, as discussed above, the first rejection is improper.

In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (CAM #095309.49630US).

Respectfully submitted,

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